

MONTHLY WEATHER REVIEW.

Editor: Prof. CLEVELAND ABBE.

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INTRODUCTION.

The MONTHLY WEATHER REVIEW for November, 1899, is based on reports from about 3,024 stations furnished by paid and voluntary observers, classified as follows: regular stations of the Weather Bureau, 158; West Indian service stations, 12; special river stations, 132; special rainfall stations, 48; voluntary observers of the Weather Bureau, 2,498; Army post hospital reports, 27; United States Life-Saving Service, 14; Southern Pacific Railway Company, 96; Canadian Meteorological Service, 32; Mexican Telegraphic Service, 20; Mexican voluntary stations, 7. International simultaneous observations are received from a few stations and used, together with trustworthy newspaper extracts and special reports.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Mr. Curtis J. Lyons, Meteorologist to the Hawaiian Government Survey, Honolulu; Senor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Señor A. M. Chaves, Director-General of Mexican Telegraphs; Mr. Maxwell Hall,

Government Meteorologist, Kingston, Jamaica; Capt. S. I. Kimball, Superintendent of the United States Life-Saving Service; and Capt. J. E. Craig, Hydrographer, United States Navy.

The REVIEW is prepared under the general editorial supervision of Prof. Cleveland Abbe.

Attention is called to the fact that the clocks and self-registers at regular Weather Bureau stations are all set to seventy-fifth meridian or eastern standard time, which is exactly five hours behind Greenwich time; as far as practicable, only this standard of time is used in the text of the REVIEW, since all Weather Bureau observations are required to be taken and recorded by it. The standards used by the public in the United States and Canada and by the voluntary observers are believed to conform generally to the modern international system of standard meridians, one hour apart, beginning with Greenwich. Records of miscellaneous phenomena that are reported occasionally in other standards of time by voluntary observers or newspaper correspondents are sometimes corrected to agree with the eastern standard; otherwise, the local meridian is mentioned.

FORECASTS AND WARNINGS.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

The month of November, 1899, was characterized by a rapid succession of areas of low barometer which advanced from the Pacific Ocean over or north of the State of Washington and thence, with diminishing strength, over the British Northwest Territory, causing persistent low barometric pressure over the northern districts and comparatively high barometric pressure over the southern districts of the United States. This distribution of pressure resulted in an undue prevalence of southerly to southwesterly winds and moderate and dry weather from the Plateau and Rocky Mountain districts to the Atlantic coast, and almost daily rains and high winds in the middle and northern Pacific coast States.

The settled character of the month's weather over the eastern half of the country was broken by two disturbances of the Gulf, or southwest type, neither of which possessed, in their passage over the Atlantic coast districts, the strength usually shown by these storms. They were, however, attended by copious rains which broke the serious drought that had prevailed in the lower Mississippi Valley and the Southwestern States.

The Lake region was not visited by gales of marked severity, although on the 1st and 2d high northerly winds seriously interfered with navigation over the southern end of Lake Michigan.

The disturbance which advanced from the Caribbean Sea to the middle Atlantic States during the closing days of

October, moved rapidly northeastward to Newfoundland during the day and night of November 1.

The heavy frosts of the opening days of the month in the Gulf and South Atlantic States were accurately forecast, and wide and timely notice of their coming was distributed throughout the sections visited.

A severe storm visited the Island of Jamaica, W. I., on the 8th and 9th, causing considerable damage to property and crops from the east end of the island to Morant Bay on the south and Lucea on the north coast.

A report from Denison, Tex., dated the 22d, stated that thousands of acres of farming land in that section were under water.

CHICAGO FORECAST DISTRICT.

The month was marked by much milder temperature than usual, and infrequent storms in the Chicago forecast district. No special warnings were issued except to vessel interests on the upper lakes.

The forecasts of October 31 and November 1, were for high northerly, and probably dangerous winds on Lakes Michigan, Huron, and eastern Superior. During the 1st and 2d high wind seriously interfered with shipping, and almost prohibited navigation over the southern end of Lake Michigan. The storms which visited the upper lakes on the 16-17th, 29th-30th were not attended by dangerously high winds.—*H. J. Cox, Professor.*